

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A shift control system having a plurality of successive shift ranges and ~~switching~~ that switches a shift range among said plurality of successive shift ranges via an actuator, comprising:

shift means driven by said actuator for switching the shift range;

restriction means for restricting, in an endmost shift range among said plurality of successive shift ranges, rotation of said actuator in the direction where no adjacent shift range is present;

rotation control means for rotating said actuator;

count means for obtaining a count value according to a relative rotational amount of said actuator; and

position setting means for setting, when said actuator is rotated by said rotation control means in the direction in which rotation of said actuator is restricted by said restriction means in said endmost shift range, a reference position of said actuator corresponding to said endmost shift range based on a state of said count value obtained by said count means,

wherein said position setting means includes reference position setting means for setting the reference position of said actuator by detecting that said count value obtained by said count means is in a state where a minimum value or a maximum value of said count value is constant for a predetermined period of time.

Claim 2 (Canceled).

Claim 3 (Currently Amended): The shift control system according to claim ~~[[2]]~~ 1, wherein said position setting means includes reference position setting means for setting a reference position of said actuator corresponding to another shift range different from said endmost shift range, based on a rotatable amount of said actuator between said endmost shift range and said another shift range.

Claim 4 (Currently Amended): The shift control system according to claim ~~[[2]]~~ 1, wherein said position setting means includes reference position setting means for setting, when said shift means switches said endmost shift range to another shift range, a reference position of said actuator corresponding to said another shift range.

Claim 5 (Previously Presented): The shift control system according to claim 4, wherein said position setting means includes detection means for detecting a rotatable amount of said actuator based on the reference position corresponding to said endmost shift range and the reference position corresponding to said another shift range.

Claim 6 (Currently Amended): The shift control system according to claim ~~[[2]]~~ 1, wherein said position setting means includes reference position setting means for setting a reference position of said actuator corresponding to another shift range at a predetermined timing in order to correct a backlash due to secular change of said shift means or said restriction means.

Claim 7 (Previously Presented): The shift control system according to claim 6, wherein said position setting means includes detection means for detecting a rotatable amount of said actuator based on the reference position corresponding to said endmost shift range and the reference position corresponding to said another shift range.

Claim 8 (Currently Amended): ~~The shift control system according to claim 1,~~ A shift control system having a plurality of successive shift ranges and that switches a shift range among said plurality of successive shift ranges via an actuator, comprising:

shift means driven by said actuator for switching the shift range;

restriction means for restricting, in an endmost shift range among said plurality of successive shift ranges, rotation of said actuator in the direction where no adjacent shift range is present;

rotation control means for rotating said actuator;

count means for obtaining a count value according to a relative rotational amount of said actuator; and

position setting means for setting, when said actuator is rotated by said rotation control means in the direction in which rotation of said actuator is restricted by said restriction means in said endmost shift range, a reference position of said actuator corresponding to said endmost shift range based on a state of said count value obtained by said count means,

wherein said position setting means includes reference position setting means for setting a reference position of said actuator corresponding to another shift range different

from said endmost shift range, based on a rotatable amount of said actuator between said endmost shift range and said another shift range.

Claims 9 and 10 (Canceled).

Claim 11 (Currently Amended): ~~The shift control system according to claim 1, A~~  
shift control system having a plurality of successive shift ranges and that switches a shift  
range among said plurality of successive shift ranges via an actuator, comprising:

shift means driven by said actuator for switching the shift range;

restriction means for restricting, in an endmost shift range among said plurality of  
successive shift ranges, rotation of said actuator in the direction where no adjacent shift range  
is present;

rotation control means for rotating said actuator;

count means for obtaining a count value according to a relative rotational amount of  
said actuator; and

position setting means for setting, when said actuator is rotated by said rotation  
control means in the direction in which rotation of said actuator is restricted by said  
restriction means in said endmost shift range, a reference position of said actuator  
corresponding to said endmost shift range based on a state of said count value obtained by  
said count means,

wherein said position setting means includes reference position setting means for setting a reference position of said actuator corresponding to another shift range at a

predetermined timing in order to correct a backlash due to secular change of said shift means or said restriction means.

Claim 12 (Previously Presented): The shift control system according to claim 11, wherein said position setting means includes detection means for detecting a rotatable amount of said actuator based on the reference position corresponding to said endmost shift range and the reference position corresponding to said another shift range.

Claim 13 (Previously Presented): The shift control system according to claim 1, wherein said rotation control means includes means for making smaller an output per unit time of said actuator driven for setting the reference position of said actuator than an output per unit time of said actuator driven for switching the shift range.

Claim 14 (Previously Presented): The shift control system according to claim 1, wherein said position setting means includes setting means for setting, based on said reference position, a target rotational position, to be attained when the shift range is switched, of said actuator in the shift range with said reference position being set.

Claim 15 (Previously Presented): The shift control system according to claim 14, wherein said rotation control means includes adjustment means for adjusting, when the shift range is switched, the rotational amount of said actuator to allow said actuator to attain said target rotational position by rotating said actuator to drive said shift means.

Claim 16 (Currently Amended): A shift control system having a plurality of successive shift ranges and ~~switching~~ that switches a shift range among said plurality of successive shift ranges via an actuator, comprising:

a shift component driven by said actuator ~~for switching~~ that switches the shift range;

a restriction component ~~for restricting~~ that restricts, in an endmost shift range among said plurality of successive shift ranges, rotation of said actuator in the direction where no adjacent shift range is present;

a rotation control unit ~~for rotating~~ that rotates said actuator;

a count unit for obtaining a count value according to a relative rotational amount of said actuator; and

a position setting unit ~~for setting~~ that sets, when said actuator is rotated by said rotation control unit in the direction in which rotation of said actuator is restricted by said restriction unit in said endmost shift range, a reference position of said actuator corresponding to said endmost shift range based on a state of said count value obtained by said count unit,

wherein said position setting unit sets the reference position of said actuator by detecting that said count value obtained by said count unit is in a state where a minimum value or a maximum value of said count value is constant for a predetermined period of time.

Claim 17 (Canceled).

Claim 18 (Currently Amended): The shift control system according to claim [[17]] 16, wherein said position setting unit sets a reference position of said actuator corresponding

to another shift range different from said endmost shift range, based on a rotatable amount of said actuator between said endmost shift range and said another shift range.

Claim 19 (Currently Amended): The shift control system according to claim [[17]] 16, wherein said position setting unit sets, when said shift component switches said endmost shift range to another shift range, a reference position of said actuator corresponding to said another shift range.

Claim 20 (Previously Presented): The shift control system according to claim 19, wherein said position setting unit detects a rotatable amount of said actuator based on the reference position corresponding to said endmost shift range and the reference position corresponding to said another shift range.

Claim 21 (Currently Amended): The shift control system according to claim [[17]] 16, wherein said position setting unit sets a reference position of said actuator corresponding to another shift range at a predetermined timing in order to correct a backlash due to secular change of said shift component or said restriction component.

Claim 22 (Previously Presented): The shift control system according to claim 21, wherein said position setting unit detects a rotatable amount of said actuator based on the reference position corresponding to said endmost shift range and the reference position corresponding to said another shift range.

Claim 23 (Currently Amended): ~~The shift control system according to claim 16, A~~  
shift control system having a plurality of successive shift ranges and that switches a shift  
range among said plurality of successive shift ranges via an actuator, comprising:

a shift component driven by said actuator that switches the shift range;

a restriction component that restricts, in an endmost shift range among said plurality  
of successive shift ranges, rotation of said actuator in the direction where no adjacent shift  
range is present;

a rotation control unit that rotates said actuator;

a count unit for obtaining a count value according to a relative rotational amount of  
said actuator; and

a position setting unit that sets, when said actuator is rotated by said rotation control  
unit in the direction in which rotation of said actuator is restricted by said restriction unit in  
said endmost shift range, a reference position of said actuator corresponding to said endmost  
shift range based on a state of said count value obtained by said count unit,

wherein said position setting unit sets a reference position of said actuator  
corresponding to another shift range different from said endmost shift range, based on a  
rotatable amount of said actuator between said endmost shift range and said another shift  
range.

Claims 24 and 25 (Canceled).



Claim 26 (Currently Amended): ~~The shift control system according to claim 16,~~ A shift control system having a plurality of successive shift ranges and that switches a shift range among said plurality of successive shift ranges via an actuator, comprising:

a shift component driven by said actuator that switches the shift range;

a restriction component that restricts, in an endmost shift range among said plurality of successive shift ranges, rotation of said actuator in the direction where no adjacent shift range is present;

a rotation control unit that rotates said actuator;

a count unit for obtaining a count value according to a relative rotational amount of said actuator; and

a position setting unit that sets, when said actuator is rotated by said rotation control unit in the direction in which rotation of said actuator is restricted by said restriction unit in said endmost shift range, a reference position of said actuator corresponding to said endmost shift range based on a state of said count value obtained by said count unit,

wherein said position setting unit sets a reference position of said actuator corresponding to another shift range at a predetermined timing in order to correct a backlash due to secular change of said shift component or said restriction component.

Claim 27 (Previously Presented): The shift control system according to claim 26, wherein said position setting unit detects a rotatable amount of said actuator based on the reference position corresponding to said endmost shift range and the reference position corresponding to said another shift range.

Claim 28 (Previously Presented): The shift control system according to claim 16, wherein said rotation control unit makes smaller an output per unit time of said actuator driven for setting the reference position of said actuator than an output per unit time of said actuator driven for switching the shift range.

Claim 29 (Previously Presented): The shift control system according to claim 16, wherein said position setting unit sets, based on said reference position, a target rotational position, to be attained when the shift range is switched, of said actuator in the shift range with said reference position being set.

Claim 30 (Previously Presented): The shift control system according to claim 29, wherein said rotation control unit adjusts, when the shift range is switched, the rotational amount of said actuator to allow said actuator to attain said target rotational position by rotating said actuator to drive said shift component.

Claims 31-58 (Canceled).